



United States  
Department of  
Agriculture  
Forest Service

# FOREST INSECT AND DISEASE MANAGEMENT

## Technology Update

South-east Area, State and Private Forestry, 1720 Peachtree Road, N.W., Atlanta, Ga. 30309

### Southern Pine Beetle Fact Sheet Number 3

#### SETTING CONTROL PRIORITIES FOR THE SOUTHERN PINE BEETLE\*

All southern pine beetle spots (groups of infested trees) do not have the same control priority. The following guidelines should help you set priorities for controlling individual spots.

A. Classify the infested trees according to the stage of attack shown below.

Symptom	Stage 1 Fresh attacks	Stage 2 Developing broods	Stage 3 Vacated trees
Foliage	Green	Green, trees with larvae; fade to yellow before new generation.	Red, needles falling.
Pitch tubes	Soft white, light pink,	White, hardened.	Hard, yellow, crumbles easily.
Checkered beetles	Adults crawl on the bark.	Larvae in SPB galleries; pink or red; 1/2 inch long.	Larvae and pupae are purple; occur in pockets in the outer bark.
Bark	Tight, hard to remove.	Loose, peels easily.	Very loose, easily removed.
Color of wood surface	White, except close to new adult galleries.	Light brown with blue or black sections.	Dark brown to black, may have sawyer galleries.
Exit holes	----	May appear where parent beetles left the tree.	Numerous
Ambrosia beetle dust	----- -----	White, begins to appear around the base of trees.	Abundant at the base of trees.

\*Compiled from a handbook of the Texas Forest Service. It will be published this fall by the USDA's Expanded Southern Pine Beetle Research and Applications Program.

**B. Collect spot expansion data:**

1. Walk completely around the spot and look for stage 1 trees, which indicate the area of most recent beetle activity. Areas with stage 1 pines are called "Active heads." Check to see if the spot is expanding in more than one direction. Large spots can have more than one active head.
2. Determine the number of stage 1 and 2 trees. For large spots that have more than 50 trees, it is not necessary to examine each tree. Just walk the boundaries and estimate the number of these trees in the spot.
3. From a location about 20 feet (6 m) in front of the active head(s), determine the pine basal area (a measure of stand density) in square feet per acre. A 10-factor prism is useful for this purpose.
4. Note whether most trees in the spot are pulpwood (less than 9 inches in diameter) (23 cm) or sawtimber size (more than 9 inches in diameter).
5. If only stage 3 trees are present, control is not necessary.
6. Determine the control priority for the spot, using the guide on the next page (item C).

**C. Guide to southern pine beetle control priorities (May through October):**

Key to spot growth	Your spot's classification	risk-rating points
A. Stage 1 trees	absent	0
	present	30
B. Stage 1 and 2 trees	1 to 10	0
	11 to 20	10
	21 to 50	20
	more than 50	40
C. Pine basal area (ft <sup>2</sup> /a) or stand density at active head or heads	less than 80 (low density)	0
	80 to 120 (medium density)	10
	more than 120 (high density)	20
D. Stand class by average d.b.h. (in inches)	pulpwood (9 inches or less)	0
	sawtimber (more than 9 inches)	10
<div> <div></div> <div>Buffer strip width (feet)</div> </div>		
If total is: 70 to 100.....control priority is: High		40 to 100
If total is: 40 to 60.....control priority is: Medium		10 to 40
If total is: 0 to 30.....control priority is: Low		10 to 40